

**United States Patent** [19]  
**Antonucci**

[11] **Patent Number:** **4,536,523**  
[45] **Date of Patent:** **Aug. 20, 1985**

[54] **DENTAL COMPOSITE FORMULATION  
FROM ACRYLATE MONOMER AND  
POLYTHIOL ACCELERATOR**

[75] **Inventor:** **Joseph M. Antonucci, Kensington,  
Md.**

[73] **Assignee:** **The United States of America as  
represented by the Secretary of the  
Department of Health & Human  
Services, Washington, D.C.**

[21] **Appl. No.:** **565,212**

[22] **Filed:** **Dec. 23, 1983**

[51] **Int. Cl.<sup>3</sup>** ..... **C08L 33/08**

[52] **U.S. Cl.** ..... **523/115; 433/228.1**

[58] **Field of Search** ..... **523/115; 433/202, 228**

[56] **References Cited**

**U.S. PATENT DOCUMENTS**

3,991,008 11/1976 Temin et al. .... 523/115

*Primary Examiner*—Harold D. Anderson

*Attorney, Agent, or Firm*—Browdy and Neimark

[57] **ABSTRACT**

A two paste dental composite formulation is disclosed, wherein one paste comprises a polymerizable monomer and a stable organic hydroperoxide initiator, and the other paste comprises a polymerizable monomer and a polythiol accelerator, the hydroperoxide having a ten-hour half-life temperature in excess of about 100° C., and the polythiol being capable of accelerating the decomposition of the hydroperoxide into polymerization initiating free radicals at ambient temperatures.

**10 Claims, No Drawings**